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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,561	11/20/2001	Mitsuru Endo	MAT-8201US	1678

7590 03/02/2006

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EXAMINER	
VO, HUYEN X	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,561	ENDO ET AL.	
	Examiner	Art Unit	
	Huyen X. Vo	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13,15,17,19,21 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-13, 15, 17, 19, 21-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11/20/2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant has submitted a response, filed 1/13/2006, while arguing to traverse prior art rejection based on a main argument regarding correction to recognized phonetic symbol string or selection of word candidates is done after phoneme recognition on the "entire utterance" (*2nd paragraph on page 4 of the Remarks/Arguments section*). Thus, applicant concludes that the prior art of record fails to disclose the claimed invention (*2nd and 3rd paragraphs on page 4 of the Remarks/Arguments section*). Applicant's argument has been fully considered, but it is not persuasive. Pfister et al. fully anticipate every claimed limitation presented in the base claims in that received input utterance is partitioned into multiple speech segments, wherein each speech segment includes one or more words (*2nd paragraph on page 19*). Each speech segment is fed into a speech recognizer to identify N most possible phoneme sequences (*3rd paragraph on page 19*), which are further processed to provide word choices for user selection (*pages 22-25*). The process is repeated, one at a time, for each of subsequent speech segments (*last two paragraphs on page 27*). Turning back applicant's argument regarding recognition of the entire utterance is done before user correction and/or selection. Identification of phoneme string of the entire utterance is not an end result of the speech recognizer. Rather, phoneme string undergoes further processing to provide possible word choices, which are considered the end result of the speech recognizer (*pages 22-23, identifying word boundaries section*). And the step of further processing of phoneme string operates one a word-

by-word basis (*3rd paragraph on page 22*). Word choices corresponding to a particular input speech word are displayed for user selection. The above processes or steps are repeated for each subsequent input speech word until the end of the utterance (*last two paragraphs on page 27*). Therefore, examiner maintains previous ground of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, 9, 13, 15, 17, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pfister et al. (WO 96/03741, applicant's admitted prior art).

4. Regarding claims 1, 5, 13, and 17, Pfister et al. disclose a method, apparatus, storage medium, and computer program product for converting inputted speech to text, comprising: an input section for inputting an utterance, said utterance comprised of a plurality of word-strings which each include one or more words (*diction mode on page 9*); an utterance pre-processing section for extracting a feature amount of the utterance of from said input section (*phonetic feature detection on page 10*); a word candidate preparing section for preparing a following word candidate from a fixed word-string (*phoneme identification section on pages 15-19*); a word-string preparing section for preparing word-string candidates based on one to several words from the extracted

feature amount of one of the plurality of word-strings of the utterance and from the word candidate (*phoneme identification section on pages 15-19*); a display section for displaying the word-string candidates (*page 20, line 1-36*); an operating section for a user to select one of the word-string candidates being displayed, the selected word-string candidate forming the fixed word-string (*Display and Editing Mode and Phonetic Symbol String Editing sections on pages 20-22*); and a candidate-preparation instructing section for instructing said word candidate preparing section to prepare a following word candidate from the fixed word-string selected by said operating section (*phoneme identification section on pages 15-19*), wherein said word-string preparing section repeats preparation of said word-string candidates for each successive word-string in said utterance using said following word candidate until the end of the utterance is reached (*Subsequent Word Resolution on page 27*).

5. Regarding claim 21, Pfister et al. further disclose the method for converting inputted speech to text according to claim 1, wherein said candidate determining step (b) determines said candidates of word-strings on the basis of a language information and an acoustic information of the selected word-strings when there are pre-selected word strings (*language models and acoustic models are inherently included in any particular speech recognition system*).

6. Regarding claims 15 and 19, Pfister et al. further disclose that the candidate preparing step (b) further having a process to update the candidate due to an acoustic score (*adaptive feedback section on pages 26-27*).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister et al. (WO 96/03741, applicant's admitted prior art) in view of Official Notice.

9. Regarding claim 9, Pfister et al. fail to specifically disclose that the apparatus is included in a cellular telephone. However, examiner takes official notice that cellular telephone having speech recognition capability is well known in the art. It would have been obvious to one of ordinary skill in the art to incorporate speech recognition capability in the cellular telephone in order to enable users to dial telephone numbers by voice without having their eyes off the road while driving.

10. Claims 3, 6-7, 10-11 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister et al. (WO 96/03741, applicant's admitted prior art) in view of Abe et al. (US 6173253).

11. Regarding claims 6 and 22, Pfister et al. further disclose speech recognition of longer speech blocks such as phrases and sentences, but fail to specifically disclose that at least one of said candidates of word-strings is a phrase built by an extension process to repeat word linking according to a word-based linkage probability on said candidate determining step (b). However, Abe et al. teach that at least one of said candidates of word-strings is a phrase built by an extension process to repeat word linking according to a word-based linkage probability on said candidate determining step (b) (*col. 7, lines 21-40*).

Since Pfister et al. and Abe et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Pfister et al. by incorporating the teaching of Abe et al. in order to determine the most probable sentence/phrase as a recognition result.

12. Regarding claims 3 and 7, Pfister et al. further disclose that the candidate preparing step (b) further having a process to update the candidate due to an acoustic score (*adaptive feedback section on pages 26-27*).

13. Regarding claims 10-11, Pfister et al. fail to specifically disclose that the apparatus is included in a cellular telephone. However, examiner takes official notice

that cellular telephone having speech recognition capability is well known in the art. It would have been obvious to one of ordinary skill in the art to incorporate speech recognition capability in the cellular telephone in order to enable users to dial telephone numbers by voice without having their eyes off the road while driving.

14. Claims 4, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfister et al. (WO 96/03741, applicant's admitted prior art) in view of Abe et al. (US 6173253), as applied to claims 3 and 7, respectively, and further in view of Huang et al. (US 5829000).

15. Regarding claims 4 and 8, the modified Pfister et al. fail disclose that the extension process is ended by reaching of the number of phrase candidates subjected to said extension process by a predetermined number as counted from a top rank in a language score. However, Huang et al. teach a re-sizeable correction that enables the user to set a limit on the number of candidate words/phrases to be displayed on the display for the user to select (*referring to col. 7-8*).

Since the modified Pfister et al. and Huang et al. are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Pfister et al. by incorporating the teaching of Huang et al. in order to provide rapid correction of misrecognized words/phrases.

16. Regarding claim 12, Pfister et al. fail to specifically disclose that the apparatus is included in a cellular telephone. However, examiner takes official notice that cellular telephone having speech recognition capability is well known in the art. It would have been obvious to one of ordinary skill in the art to incorporate speech recognition capability in the cellular telephone in order to enable users to dial telephone numbers by voice without having their eyes off the road while driving.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HXV 2/23/2006

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RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER